

BIOLOGICAL NOTES ON CHABUATA, STRECKER

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In August, 1831, a noctuid unknown to me emerged in one of my breeding cages. It was later identified as *Chabuata notata* by Mr. Alex K. Wyatt. I could not give a correct answer to his question about its origin, but could only guess that the pupa had been carried in with some *Papaipema* material dug up in the prairies northwest of the city.

The following year luck was with me when collecting about the same locality on the afternoon of May twenty-second. My attention was centered upon the various plants of the prairie, which at this time of year in their early growth, are more or less of a botanical puzzle. Certain bunches of leaves were an outstanding feature of the field by their abundance and their clustered patches. The plant was later identified as the Stiff or Hard Leaved Golden-rod (*Solidago rigida*). What was more interesting at the time; there was considerable evidence of larval feeding on these leaves, so much that I decided I must find the culprits. No larva was to be found on the leaves. On the ground around the base of the plants and nearby was a variety of litter, mostly dried leaves of poplar, Prairie Dock and of the golden-rod itself, some attached to pieces of last year's stems. Every bit was turned and examined and it was not long before the first larva was found. It was concealed in a bit of old golden-rod leaf, rolled and formed into a snug fitting case or house fastened together with silk. After this first find it became easier to recognize the hidden treasure by sight and feeling, the weight of the nearly mature larva easily distinguishing a full house from an empty leaf. Not knowing the identity of my find, I continued the search and gathered about twenty-five of these larvae. They were of typical noctuid character, grey with a reddish brown tint and velvety skin. No distinctive features were noticeable and it will take a more skilled observer to write a thorough description.

The rearing of the larvae offered no difficulty; they finished feeding about June 10 and pupation took place promptly on or under the surface of soil, particles of which were mixed with silk in the construction of a loose cocoon.

A thrill of surprise and pleasure was enjoyed when the first moth appeared on August 10 and the identity of the species was revealed as *Chabuata notata*. A total of eighteen moths was obtained, the last one emerging on September 4. Four of the moths showed

a distinct variation from normal in the absence of the cream colored spot in the reniform. A few larvae had been parasitized and a number of small red Ichneumons were noticed but not recorded. Emergence of the moths occurred in the late afternoon.

This larva has since been collected repeatedly and is apparently well distributed wherever this golden-rod is frequent. Last year (1937) Mr. Wyatt and I found a few *notata* larvae which had been feeding on the Prairie Dock (*Silphium terrebinthinaceum*) and new growth of this plant was accepted as food by captive larvae. A number of larvae were picked from the folds of dry leaves of this plant, which afford an ideal shelter for them, though they may have been feeding on the golden-rod.

It is apparent that prairie fires in fall or early spring will destroy sheltering possibilities for the larvae and often the larvae themselves. In localities thus deprived, the collector will have poor success. It has not yet been determined whether hibernation of *notata* takes place in the egg or the early larval stage, but until proof is ascertained by observation, it may be assumed that the latter is true, as is the case with *Chabuata signata*.

THE IDENTITY OF *TABANUS MOERENS* FABR.

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Philip (1931. U. Minn. Tech. Bul. 80, p. 82) was the first to call attention to the existence of *Tabanus moerens* Fabr., referring to a description published by Fabricius in 1794. On a basis of this description alone, Philip decided that Fabricius' *moerens* was a *Chrysops* and the later *Chrysops moerens* of Walker (1848. List. Dipt. Brit. Mus., Pt. 1, p. 201) must necessarily fall; *Chrysops aestuans* v. d. Wulp (1867. Tijd. v. Ent. 10, p. 135), a synonym of *C. moerens* Walk., thus became the valid name for Walker's species. Brennan (1935. U. Kan. Sci. Bul. 22, No. 13, p. 261) followed Philip's interpretation.

However, by correspondence with a number of European and American workers, the writer found that Philip's interpretation was not generally accepted since the identity of *Tabanus moerens* was completely unknown; one worker, apparently without any attempt to verify Philip's reference, went as far as to say that such an insect did not exist. It is true that as far as the literature on Tabanidae is concerned, *Tabanus moerens* had no existence. It is not listed in Kertész's "Catalogus Dipteroorum" (1908), in